

AMENDMENTS TO THE CLAIMS

The claims are amended to show deleted text in strikethrough and added text as underscored. Claim 66 is cancelled herein without prejudice, and claims 74-106 are added herein.

Listing of Claims:

1. (Previously Presented) An oral dosage form comprising

(i) an opioid agonist in releasable form, and

(ii) particles consisting of an opioid antagonist, a sequestering material and one or more additional pharmaceutically acceptable excipients,

wherein the sequestering material separates the antagonist from the agonist and substantially prevents the release of the antagonist from the dosage form which has been administered intact such that an amount of the antagonist released at 1 and 2 hours from the dosage form which has been administered intact is undetectable by High Performance Liquid Chromatography, and less than 15% by weight of the opioid antagonist is released within 36 hours after the administration of the intact dosage form, based on an in-vitro dissolution of the intact dosage form in a dissolution bath; and

a ratio of the amount of the antagonist released from the dosage form after tampering to the amount of the antagonist released from the intact dosage form is about 4:1 or greater, based on the in-vitro dissolution of the dosage form at 1 hour in 900 ml of Simulated Gastric Fluid using a USP Type II (paddle) apparatus at 75 rpm at 37 degrees C;

wherein the agonist and the particles are interdispersed and are not isolated from each other in two distinct layers.

2. (Previously Presented) An oral dosage form comprising

(i) an opioid agonist in releasable form, and

(ii) particles consisting of an opioid antagonist, a sequestering material and one or more additional pharmaceutically acceptable excipients,

wherein the sequestering material separates the antagonist from the agonist and substantially prevents the release of the antagonist from the dosage form which has been administered intact such that

an amount of the antagonist released at 1 and 2 hours from the dosage form which has been administered intact is undetectable by High Performance Liquid Chromatography, and less than 15% by weight of the opioid antagonist is released within 36 hours after the administration of the intact dosage form, based on an in-vitro dissolution of the intact dosage form in a dissolution bath; and

a ratio of an amount of the antagonist released from the dosage form after tampering to the amount of the antagonist released from the intact dosage form is about 4:1 or greater, based on the in-vitro dissolution of the dosage form at 1 hour in 900 ml of Simulated Gastric Fluid using a USP Type II (paddle) apparatus at 75 rpm at 37 degrees C;

wherein the particles are individually coated with the sequestering material.

3. (Previously Presented) An oral dosage form comprising

(i) an opioid agonist in releasable form, and

(ii) particles consisting of an opioid antagonist, a sequestering material and one or more additional pharmaceutically acceptable excipients,

the antagonist and the additional one or more pharmaceutically acceptable excipients dispersed in a matrix of the sequestering material,

the sequestering material separates the antagonist from the agonist and substantially prevents the release of the antagonist from the dosage form which has been administered intact such that

an amount of the antagonist released at 1 and 2 hours from the dosage form which has been administered intact is undetectable by High Performance Liquid Chromatography, and less than 15% by weight of the opioid antagonist is released within 36 hours after the administration of the intact dosage form, based on an in-vitro dissolution of the intact dosage form in a dissolution bath;

wherein a ratio of the amount of the antagonist released from the dosage form after tampering to the amount of the antagonist released from the intact dosage form is about 4:1 or greater, based on the in-vitro dissolution at 1 hour of the dosage form in 900 ml of Simulated Gastric Fluid using a USP Type II (paddle) apparatus at 75 rpm at 37 degrees C.

4. (Previously Presented) An oral dosage form comprising

- (i) an opioid agonist in releasable form,
- (ii) particles consisting of an opioid antagonist, a sequestering material and one or more additional pharmaceutically acceptable excipients,

wherein the sequestering material separates the antagonist from the agonist and substantially prevents the release of the antagonist from the dosage form which has been administered intact such that

an amount of the antagonist released at 1 and 2 hours from the dosage form which has been administered intact is undetectable by High Performance Liquid Chromatography, and less than 15% by weight of the opioid antagonist is released within 36 hours after the administration of the intact dosage form, based on an in-vitro dissolution of the intact dosage form in a dissolution bath; and

a ratio of an amount of the antagonist contained in the intact dosage form to the amount of the antagonist released from the intact dosage form after 1 hour is about 4:1 or greater,

based on the in-vitro dissolution at 1 hour of the dosage form in 900 ml of Simulated Gastric Fluid using a USP Type II (paddle) apparatus at 75 rpm at 37 degrees C;

wherein the agonist and the particles are interdispersed and are not isolated from each other in two distinct layers.

5. (Previously Presented) An oral dosage form comprising

(i) an opioid agonist in a releasable form;

(ii) particles consisting of an opioid antagonist, a sequestering material and one or more additional pharmaceutically acceptable excipients,

wherein the sequestering material separates the antagonist from the agonist and substantially prevents the release of the antagonist from the dosage form which has been administered intact such that

an amount of the antagonist released at 1 and 2 hours from the dosage form which has been administered intact is undetectable by High Performance Liquid Chromatography, and less than 15% by weight of the opioid antagonist is released within 36 hours after the administration of the intact dosage form, based on an in-vitro dissolution of the intact dosage form in a dissolution bath;

wherein the amount of the antagonist released after 1 hour from the dosage form after tampering is an amount bioequivalent to 0.25 mg naltrexone or more, based on the dissolution at 1 hour of the dosage form in 900 ml of Simulated Gastric Fluid using a USP Type II (paddle) apparatus at 75 rpm at 37 degrees C, and the agonist and the particles are interdispersed and are not isolated from each other in two distinct layers.

6. (Previously Presented): An oral dosage form comprising

(i) an opioid agonist in a releasable form;

(ii) particles consisting of naltrexone or a pharmaceutically acceptable salt thereof, a sequestering material and one or more additional pharmaceutically acceptable excipients,

wherein the sequestering material separates the naltrexone from the agonist and substantially prevents the release the naltrexone from the dosage form which has been administered intact such that

an amount of the naltrexone released at 1 and 2 hours from the dosage form which has been administered intact is undetectable by High Performance Liquid Chromatography, and less than 15% by weight of the naltrexone is released within 36 hours after the administration of the intact dosage form, based on an in-vitro dissolution of the intact dosage form in a dissolution bath; and

wherein the amount of the naltrexone released after 1 hour from the dosage form after tampering is 0.25 mg or more, based on the dissolution at 1 hour of the dosage form in 900 ml of Simulated Gastric Fluid using a USP Type II (paddle) apparatus at 75 rpm at 37 degrees C, and the agonist and the particles are interdispersed and are not isolated from each other in two distinct layers.

7. (Previously Presented) An oral dosage form comprising
(i) a therapeutically effective dose of an opioid agonist;
(ii) particles consisting of an opioid antagonist, a sequestering material and one or more additional pharmaceutically acceptable excipients,

wherein the sequestering material separates the antagonist from the agonist and substantially prevents the release the antagonist from the dosage form such that

an amount of the antagonist released at 1 and 2 hours from the dosage form which has been administered intact is undetectable by High Performance Liquid Chromatography, and

less than 15% by weight of the opioid antagonist is released within 36 hours after the administration of the intact dosage form, based on an in-vitro dissolution of the intact dosage form in a dissolution bath; and

at 1 hour after oral administration, the intact dosage form releases not more than 25% of the antagonist, the dosage form providing analgesia and the released antagonist not affecting analgesic efficacy,

wherein the agonist and the particles are interdispersed and are not isolated from each other in two distinct layers.

8. (Previously Presented) An oral dosage form comprising:

- (i) an opioid agonist in a releasable form;
- (ii) particles of an opioid antagonist in substantially non-releasable form,

the particles consisting of the antagonist and one or more additional pharmaceutically acceptable excipients, wherein one of the excipients is a material that separates the antagonist from the agonist and substantially prevents the release of the antagonist from the dosage form which has been administered intact such that

an amount of the antagonist released at 1 and 2 hours from the dosage form which has been administered intact is undetectable by High Performance Liquid Chromatography, and less than 15% by weight of the opioid antagonist is released within 36 hours after the administration of the intact dosage form, based on an in-vitro dissolution of the intact dosage form in a dissolution bath;

wherein the material is coated over the antagonist.

9. (Previously Presented) An oral dosage form comprising:

- (i) an opioid agonist in a releasable form; and
- (ii) particles of an opioid antagonist in substantially non-releasable form,

wherein the particles consist of the antagonist and one or more additional pharmaceutically acceptable excipients, one of the excipients being a sequestering material, wherein the antagonist is dispersed in a matrix consisting of the sequestering material and the additional pharmaceutically acceptable excipients, and separates the antagonist from the agonist and substantially prevents the release of the antagonist from the dosage form which has been administered intact such that

an amount of the antagonist released at 1 and 2 hours from the dosage form which has been administered intact is undetectable by High Performance Liquid Chromatography, and less than 15% by weight of the opioid antagonist is released within 36 hours after the administration of the intact dosage form, based on an in-vitro dissolution of the intact dosage form in a dissolution bath.

10. (Previously Presented) The oral dosage form of claim 1, wherein the ratio is 10:1 or greater.

11. (Previously Presented) The oral dosage form of claim 1, wherein the ratio is 50:1 or greater.

12. (Previously Presented) The oral dosage form of claim 1, wherein the ratio is 100:1 or greater.

13-14. (Cancelled)

15. (Previously Presented) The oral dosage form of claim 5, wherein the amount of antagonist released after 1 hour from the tampered dosage form is an amount bioequivalent to 0.5 mg naltrexone or more.

16. (Cancelled)

17. (Previously Presented) The oral dosage form of claim 6, wherein the amount of antagonist released after 1 hour from the tampered dosage form is 0.5 mg naltrexone or more.

18. (Cancelled)

19. (Original) The oral dosage form of claim 1, wherein the opioid agonist is selected from the group consisting of morphine, hydromorphone, hydrocodone, oxycodone, codeine, levorphanol, meperidine, methadone, oxymorphone, buprenorphine, fentanyl and derivatives thereof, dipipanone, heroin, tramadol, etorphine, dihydroetorphine, butorphanol, levorphanol, pharmaceutically acceptable salts thereof and mixtures thereof.

20. (Original) The oral dosage form of claim 19, wherein the opioid agonist is selected from the group consisting of oxycodone, hydrocodone and pharmaceutically acceptable salts thereof.

21. (Original) The oral dosage form of claim 1, wherein the opioid antagonist is selected from the group consisting of naltrexone, naloxone, nalmephene, cyclazocine, levallorphan, pharmaceutically acceptable salts thereof and mixtures thereof.

22. (Original) The oral dosage form of claim 21, wherein the opioid antagonist is selected from the group consisting of naltrexone, naloxone, nalmephene, pharmaceutically acceptable salts thereof and mixtures thereof.

23. (Original) The oral dosage form of claim 22, wherein the opioid antagonist comprises naltrexone or a pharmaceutically acceptable salt thereof.

24. (Previously Presented) The oral dosage form of claim 2, wherein the sequestering material comprises a cellulose polymer or an acrylic polymer that is insoluble in the gastrointestinal tract and impermeable to the opioid antagonist contained within the coating.

25. (Original) The oral dosage form of claim 24, wherein the cellulose polymer is selected from the group consisting of ethylcellulose, cellulose acetate, cellulose propionate, cellulose acetate propionate, cellulose acetate butyrate, cellulose acetate phthalate, and mixtures thereof.

26 (Original) The oral dosage form of claim 24, wherein the acrylic polymer is selected from the group consisting of acrylic acid and methacrylic acid copolymers, methyl methacrylate copolymers, ethoxyethyl methacrylates, cyanoethyl methacrylate, poly(acrylic acid), poly(methacrylic acid), methacrylic acid alkylamide copolymer, poly(methyl methacrylate), polymethacrylate, poly(methyl methacrylate) copolymer, polyacrylamide, aminoalkyl methacrylate copolymer, poly(methacrylic acid anhydride), and glycidyl methacrylate copolymers.

27. (Original) The oral dosage form of claim 1, wherein the dosage form provides sustained-release of the opioid agonist.

28. (Original) The oral dosage form of claim 27, wherein the dosage form is a sustained-release tablet or a sustained-release capsule.

29. (Previously Presented) The oral dosage form of claim 2, wherein the particles are in the form of inert beads coated with the antagonist.

30. (Previously Presented) The oral dosage form of claim 2, wherein the particles of are in the form of a granulation consisting of the antagonist, the one or more additional pharmaceutically acceptable excipients and the sequestering material.

31. (Previously Presented) The oral dosage form of claim 2, wherein the particles are dispersed in a matrix comprising the agonist.

32. (Previously Presented) The oral dosage form of claim 2, wherein the particles are contained in a capsule with the agonist.

33. (Previously Presented) The oral dosage form of claim 3, wherein the matrix is in the form of pellets.

34. (Previously Presented) The oral dosage form of claim 33, wherein the pellets are dispersed in a matrix comprising the agonist.

35. (Previously Presented) The oral dosage form of claim 33, wherein the pellets are contained in a capsule with the agonist.

36. (Previously Presented) The oral dosage form of claim 1, wherein the tampering is by crushing.

37. (Previously Presented) The oral dosage form of claim 27, wherein the tampering is in a manner as to obtain an immediate release of the agonist.

38. (Previously Presented) The oral dosage form of claim 1, wherein the tampering is to make the agonist available for inappropriate use.

39. (Previously Presented) The oral dosage form of claim 1, wherein the antagonist does not significantly affect analgesia provided by the agonist.

40. (Previously Presented) A method of decreasing the abuse of an opioid agonist in an oral dosage form, comprising incorporating the opioid agonist into a dosage form of claim 1.

41. (Previously Presented) A dosage form comprising:

(a) an opioid agonist;

(b) particles of naltrexone in a substantially non-releasable form;

wherein

the particles consist of the naltrexone and one or more pharmaceutically acceptable excipients comprising a sequestering material,

the sequestering material separates the naltrexone from the agonist and sequesters the naltrexone such that

an amount of the naltrexone released at 1 and 2 hours from the dosage form which has been administered intact is undetectable by High Performance Liquid Chromatography, and less than 15% by weight of the naltrexone is released within 36 hours after said administration, based on an in-vitro dissolution of the intact dosage form in a dissolution bath; and

the agonist and the particles are at least partially interdispersed.

42. (Original) The dosage form of claim 41 wherein the opioid agonist is oxycodone, codeine, hydrocodone, hydromorphone, levorphanol, meperidine, methadone, morphine, salts thereof, or mixtures thereof.

43. (Original) The dosage form of claim 42 wherein the opioid agonist is oxycodone hydrochloride.

44. (Original) The dosage form of claim 42 wherein the opioid agonist is hydrocodone bitartrate.

45. (Original) The dosage form of claim 42 wherein the opioid agonist is hydromorphone hydrochloride.

46. (Original) The dosage form of claim 41 wherein at least part of the naltrexone is in a matrix.

47. (Original) The dosage form of claim 41 wherein at least part of the naltrexone is in a coated bead.

48. (Original) The dosage form of claim 41 wherein the naltrexone in a substantially non-releasable form is adapted to release less than 15% by weight of the naltrexone in vivo after 36 hours.

49. (Original) The dosage form of claim 48 wherein the naltrexone in a substantially non-releasable form is adapted to release less than 8% by weight of the naltrexone in vivo after 36 hours.

50. (Original) The dosage form of claim 49 wherein the naltrexone in a substantially non-releasable form is adapted to release less than 1% by weight of the naltrexone in vivo after 36 hours.

51. (Original) The dosage form of claim 41 wherein the naltrexone in a substantially non-releasable form is adapted to release less than 3% by weight of the naltrexone in vivo after 1 hour.

52. (Original) The dosage form of claim 41 wherein the naltrexone in a substantially non-releasable form is adapted to release less than 1.0% by weight of the naltrexone in vivo after 1 hour.

53. (Original) The dosage form of claim 41 wherein the naltrexone in a substantially non-releasable form is adapted to release less than 0.5% by weight of the naltrexone in vivo after 1 hour.

54. (Previously Presented) A dosage form comprising:

(a) an opioid agonist;
(b) particles of an orally-bioavailable opioid antagonist in a substantially non-releasable form, the particles consisting of the orally-bioavailable opioid antagonist, one or more pharmaceutically acceptable excipients and
a sequestering material which separates the orally-bioavailable antagonist from the agonist,

wherein

an amount of the orally-bioavailable antagonist released at 1 and 2 hours from the dosage form which has been administered intact is undetectable by High Performance Liquid Chromatography, and less than 15% by weight of the opioid antagonist is released within 36 hours after the administration of the intact dosage form, based on an in-vitro dissolution of the intact dosage form in a dissolution bath.

55. (Original) The dosage form of claim 54 wherein the agonist and antagonist are at least partially interdispersed.

56. (Original) The dosage form of claim 54 wherein the orally-bioavailable opioid antagonist is naltrexone, or a salt thereof.

57. (Original) The dosage form of claim 54 wherein the opioid agonist is oxycodone, codeine, hydrocodone, hydromorphone, levorphanol, meperidine, methadone, morphine, or salts thereof or mixtures thereof.

58. (Original) The dosage form of claim 54 wherein at least part of the antagonist is in a matrix.

59. (Original) The dosage form of claim 54 wherein at least part of the antagonist is in a coated bead.

60. (Cancelled)

61. (Original) A method of treating pain comprising administering to a human patient a dosage form of claim 1.

62. (Previously Presented) The oral dosage form of any one of claims 1, 2, 3, 4, 5, 7, 19, 21, 29, 30, 31, 32, 33, or 34, wherein the amount of the antagonist released at 4 hours from the dosage form which has been administered intact is undetectable by High Performance Liquid Chromatography.

63. (Currently Amended) The oral dosage form of any one of claims 1, 2, 3, 4, 7, 8, 9, 14, 19, 21, 25, 26, 27, 29, 30, 31, 32, 33, 34, 41, 42, 48, 54, 55, 56, 57, 58, or 59, wherein an amount of the antagonist released from the dosage form which has been administered intact is insufficient to produce an antagonistic effect of the antagonist.

64. (Previously Presented) The oral dosage form of claim 62, wherein the amount of the antagonist released at 12 hours from the dosage form which has been administered intact is undetectable by High Performance Liquid Chromatography.

65. (Previously Presented) The oral dosage form of any one of claims 1, 2, 3, 4, 5, 7, 8 or 9, wherein the amount of the opioid antagonist released from the dosage form which has been subjected to tampering will produce an antagonistic effect of the antagonist in a human patient.

66. (Cancelled).

67. (Previously Presented) The oral dosage form of claim 6, wherein the amount of the naltrexone released from the dosage form which has been subjected to tampering will produce an antagonistic effect of the naltrexone in a human patient.

68. (Previously Presented) The oral dosage form of claim 41, wherein the amount of the naltrexone released from the dosage form which has been subjected to tampering will produce an antagonistic effect of the naltrexone in a human patient.

69. (Previously Presented) The oral dosage form of claim 54, wherein the amount of the orally-bioavailable opioid antagonist released from the dosage form which has been subjected to tampering will produce an antagonistic effect of the orally-bioavailable opioid antagonist in a human patient.

70. (Previously Presented) The oral dosage form of claim 2, wherein the sequestering material is an acrylic polymer.

71. (Previously Presented) The oral dosage form of claim 3, wherein the sequestering material is an acrylic polymer.

72. (Previously Presented) The dosage form of claim 8, wherein the material is an acrylic polymer.

73. (Previously Presented) The dosage form of claim 9, wherein the material is an acrylic polymer.

74. (New) A pharmaceutical composition comprising:

(i) particles comprising:

(a) an opioid antagonist, and
(b) a sequestering material comprising a surfactant; and
(ii) an opioid agonist;
wherein the sequestering material separates the antagonist from the agonist and substantially prevents the release of the antagonist from the particle and wherein a portion of said opioid agonist overcoats all of the composition which contains said particles.

75. (New) A pharmaceutical composition as defined in claim 74, wherein said sequestering material comprises a coating over said opioid antagonist.

76. (New) A pharmaceutical composition as defined in claim 74, wherein said opioid antagonist comprises naltrexone or a pharmaceutically acceptable salt thereof.

77. (New) A pharmaceutical composition as defined in claim 74, wherein said surfactant comprises stearyl alcohol.

78. (New) A pharmaceutical composition as defined in claim 74, wherein said opioid agonist comprises morphine or a pharmaceutically acceptable salt thereof.

79. (New) A pharmaceutical composition as defined in claim 74, adapted to release less than 15% by weight of said opioid antagonist from said composition in vivo after 36 hours.

80. (New) A pharmaceutical composition as defined in claim 79, adapted to release less than 8% by weight of said opioid antagonist from said composition in vivo after 36 hours.

81. (New) A pharmaceutical composition as defined in claim 80, adapted to release less than 3% by weight of said opioid antagonist from said composition in vivo after 36 hours.

82. (New) A pharmaceutical composition as defined in claim 81, adapted to release less than 1% by weight of said opioid antagonist from said composition in vivo after 36 hours.

83. (New) A pharmaceutical composition as defined in claim 82, adapted to release less than 0.5% by weight of said opioid antagonist from said composition in vivo after 36 hours.

84. (New) A pharmaceutical composition comprising:

(i) an opioid antagonist coated with a coating comprising a hydrophobic material and a surfactant; and

(ii) an opioid agonist;

wherein a portion of said opioid agonist overcoats all of the composition which contains said coated opioid antagonist.

85. (New) A pharmaceutical composition as defined in claim 84, wherein said opioid antagonist comprises naltrexone or a pharmaceutically acceptable salt thereof.

86. (New) A pharmaceutical composition as defined in claim 84, wherein said surfactant comprises stearyl alcohol.

87. (New) A pharmaceutical composition as defined in claim 84, wherein said hydrophobic material comprises an acrylic resin.

88. (New) A pharmaceutical composition as defined in claim 87, wherein said acrylic resin comprises an EUDRAGIT® RS.

89. (New) A pharmaceutical composition as defined in claim 84, wherein said opioid agonist comprises morphine or a pharmaceutically acceptable salt thereof.

90. (New) A pharmaceutical composition as defined in claim 84, adapted to release less than 15% by weight of said opioid antagonist from said composition in vivo after 36 hours.

91. (New) A pharmaceutical composition as defined in claim 90, adapted to release less than 8% by weight of said opioid antagonist from said composition in vivo after 36 hours.

92. (New) A pharmaceutical composition as defined in claim 91, adapted to release less than 3% by weight of said opioid antagonist from said composition in vivo after 36 hours.

93. (New) A pharmaceutical composition as defined in claim 92, adapted to release less than 1% by weight of said opioid antagonist from said composition in vivo after 36 hours.

94. (New) A pharmaceutical composition as defined in claim 93, adapted to release less than 0.5% by weight of said opioid antagonist from said composition in vivo after 36 hours.

95. (New) A pharmaceutical composition comprising particles comprising:

- (a) an opioid antagonist, and
- (b) a sequestering material comprising a surfactant;

adapted to release less than 15% by weight to less than 0.5% by weight of said opioid antagonist from said composition in vivo after 36 hours.

96. (New) A pharmaceutical composition as defined in claim 95, wherein said sequestering material comprises a coating over said opioid antagonist.

97. (New) A pharmaceutical composition as defined in claim 95, wherein said opioid antagonist comprises naltrexone or a pharmaceutically acceptable salt thereof.

98. (New) A pharmaceutical composition as defined in claim 95, wherein said surfactant comprises stearyl alcohol.

99. (New) A pharmaceutical composition as defined in claim 95, adapted to release less than 1% by weight of said opioid antagonist from said composition in vivo after 36 hours.

100. (New) A pharmaceutical composition comprising an opioid antagonist coated with a coating comprising a hydrophobic material and a surfactant, adapted to release less than 15% by weight to less than 0.5% by weight of said opioid antagonist from said composition in vivo after 36 hours.

101. (New) A pharmaceutical composition as defined in claim 100, wherein said sequestering material comprises a coating over said opioid antagonist.

102. (New) A pharmaceutical composition as defined in claim 100, wherein said opioid antagonist comprises naltrexone or a pharmaceutically acceptable salt thereof.

103. (New) A pharmaceutical composition as defined in claim 100, wherein said surfactant comprises stearyl alcohol.

104. (New) A pharmaceutical composition as defined in claim 100, wherein said hydrophobic material comprises an acrylic resin.

105. (New) A pharmaceutical composition as defined in claim 104, wherein said acrylic resin comprises an EUDRAGIT® RS.

106. (New) A pharmaceutical composition as defined in claim 100, adapted to release less than 1% by weight of said opioid antagonist from said composition in vivo after 36 hours.